



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/044,759	01/09/2002	Michel Daumerie	FINA-0867	8362
25264	7590	11/17/2004		
FINA TECHNOLOGY INC PO BOX 674412 HOUSTON, TX 77267-4412			EXAMINER CHEUNG, WILLIAM K	
			ART UNIT	PAPER NUMBER
			1713	

DATE MAILED: 11/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/044,759

Applicant(s)

DAUMERIE ET AL.

Examiner

William K Cheung

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The examiner acknowledges that in the Applicants' Initiated Interview of October 1, 2004, the examiner has concurred with applicants that the process of Klusmann et al. and the applicants' inventive process are different. However, after a careful review of the claim language again, the examiner believes that the invention as claimed are substantially identical for the following reasons.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-10, 12-15, 16-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Klusmann et al. (US 6,143,833) for the reasons adequately set forth from paragraph 2 from non-final office action issued August 18, 2004.

Klusmann et al. (Figure 2 and 3; col. 1, line 60-67; col. 2, line 45-67; col. 3, line 1-12; col. 3, line 45-65; col. 4, line 9-31; col. 4-5, claim 1) disclose a method of

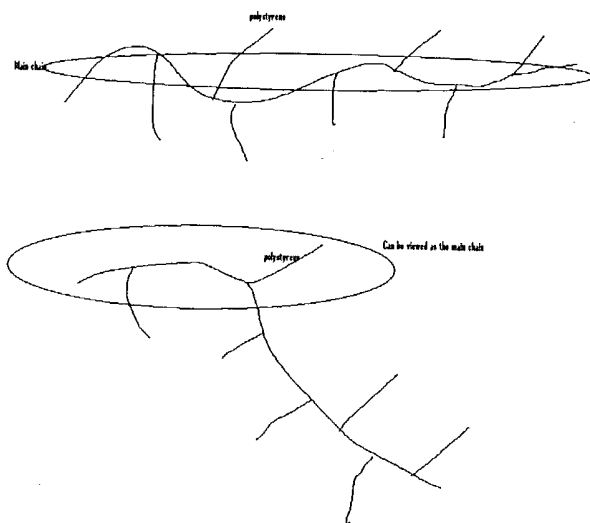
Art Unit: 1713

manufacturing a block copolymer comprising passing a block copolymerization product through first devolatilizer operated at a first low temperature to form a once devolatilized block copolymer product and then passing said once devolatilized block copolymer product from said first devolatilizer to a second devolatilizer operated at a second temperature to form a twice devolatilized block copolymer product. Klusmann et al. (col. 3, line 45-65) clearly indicate that the devolatilization process is performed at about 105 torr and temperature ranges from 140 to 150 °F.

Regarding the claimed "block copolymer" feature, applicants must recognize that the disclosed polymerization process involves the incorporation of polybutadiene into the disclosed styrene polymerization to result a copolymer having blocks of polybutadiene attached. Klusmann et al. contain all the limitation of claims 1-10, 12-15, 16-18, claims 1-10, 12-15, 16-18 are anticipated.

Applicant's arguments filed October 4, 2004 have been fully considered but they are not persuasive. Applicants argue that Klusman et al. teach the formation of polystyrene chains grafted onto a polybutadiene backbone and do not teach or suggest the forming or processing block copolymers. However, applicants must recognize that a block copolymer means a copolymer having a regular placement of repeating units in a copolymer. Whether the copolymer is linear, branched, comb-like, or ladder-like copolymer in (2-D structures), as long as the copolymers of Klusmann et al. are having a regular placement of repeating units in a copolymer, the copolymers of Klusmann et

al. is a block copolymer. Conceptually, applicants must also understand that a grafted copolymer can be viewed in many different ways. The grafted polystyrene block units can also be viewed as part of the main chain which constitutes a block copolymer in the main chain.



Applicants also argue that the process of Klussman et al. is related to crosslinking and the applicants' claims involve devolatilizing under gentle conditions to specifically avoid crosslinking. However, the applicants' claims as written do not exclude crosslinking in the process.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

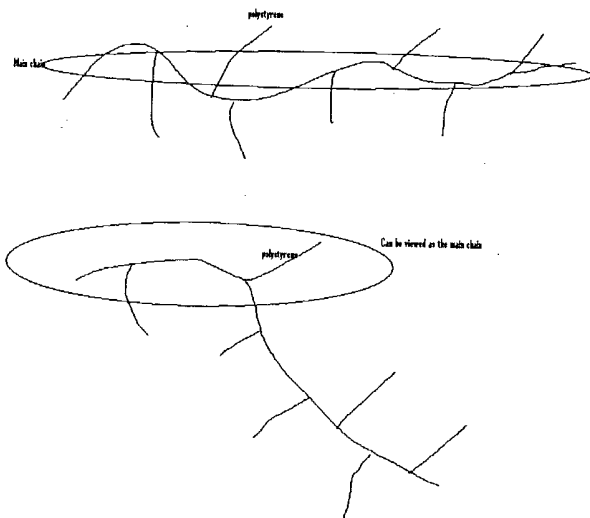
The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 11, 19 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Klusmann et al. (US 6,143,833) for the reasons adequately set forth from paragraph 5 from non-final office action issued August 18, 2004.

Applicant's arguments filed October 4, 2004 have been fully considered but they are not persuasive. Applicants argue that Klusmann et al. teach the formation of polystyrene chains grafted onto a polybutadiene backbone and do not teach or suggest the forming or processing block copolymers. However, applicants must recognize that a

block copolymer means a copolymer having a regular placement of repeating units in a copolymer. Whether the copolymer is linear, branched, comb-like, or ladder-like copolymer in (2-D structures), as long as the copolymers of Klusmann et al. are having a regular placement of repeating units in a copolymer, the copolymers of Klusmann et al. is a block copolymer. Conceptually, applicants must also understand that a grafted copolymer can be viewed in many different ways. The grafted polystyrene block units can also be viewed as part of the main chain which constitutes a block copolymer in the main chain.



Applicants also argue that the process of Klusman et al. is related to crosslinking and the applicants' claims involve devolatilizing under gentle conditions to

specifically avoid crosslinking. However, the applicants' claims as written do not exclude crosslinking in the process.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William K Cheung whose telephone number is (571) 272-1097. The examiner can normally be reached on Monday-Friday 9:00AM to 2:00PM; 4:00PM to 8:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David WU can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



William K. Cheung

Primary Examiner

November 12, 2004

WILLIAM K. CHEUNG
PRIMARY EXAMINER